MYCOTAXON

Volume 108, pp. 155–158 *April–June 2009*

Opegrapha pauciexcipulata, a new corticolous lichen from Turkey

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Abstract — *Opegrapha pauciexcipulata*, a new corticolous lichen, is described from the centre of Giresun on the Black Sea Coast in Turkey. It is characterized by an open disc and *vulgata*-type ascospores and pycnidia.

Keywords — *Ascomycota*, *Opegraphaceae*, taxonomy, lichen order

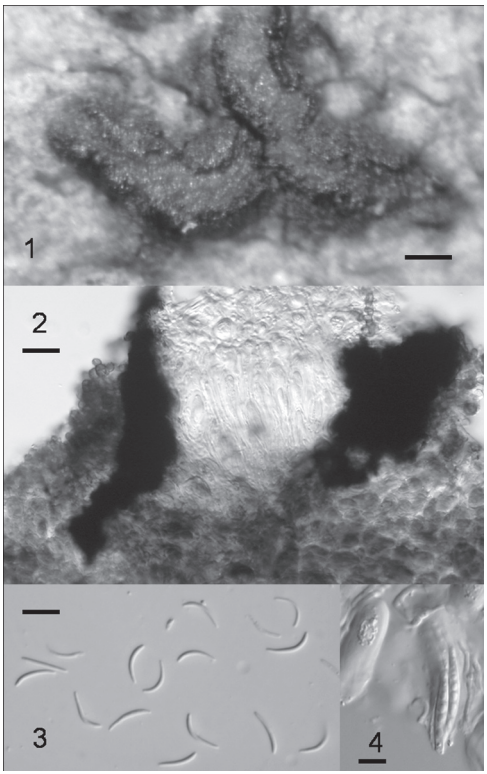
Introduction

During fieldwork by the first author in the past decades, many additions have been found to the lichen flora of Turkey. An inventory of the corticolous lichens on deciduous trees in the city centre of Giresun in Turkey was carried out to map the air pollution (Yazici & Aptroot 2008). One of the species, present with four collections, could not be identified by the second author. It is described here as new to science.

Giresun is a city at the Black Sea coast. The area has a typical oceanic climate with a mild and high precipitation prevailing along the coast. The average elevation is 50 m. The annual temperature is 14.2 °C in the centre of Giresun, while annual precipitation is 1305 mm. On average there are 184 rainy days, 6 snowy days and 11 days with snow cover. Rainy days occur in every season. Common trees in the city centre are *Albizia julibrissin, Robinia pseudoacacia, Salix* sp., *Acer* sp., *Ligustrum* sp., *Platanus orientalis* and *Fraxinus* sp.

Material and methods

All specimens were collected in the city centre of Giresun on the Black Sea Coast in Turkey. The specimens were examined with an Olympus SZX7 dissecting



Figures 1-4. *Opegrapha pauciexcipulata,* isotype.
1. Habitus of apothecium. 2. Section of apothecium.
3. Conidia in tap water. 4. Ascus and ascospores in KOH.
Bar = 0.1 mm in fig. 1; 15 µm in fig. 2; 10 µm in fig. 3; 5 µm in fig. 4.

microscope and an Olympus BX50 compound microscope with Nomarski interference contrast, both with a Nikon Coolpix digital camera attached. Measurements were taken in tap water. Specimens are preserved in the herbarium of Biology Department, Karadeniz Technical University (KTUB), with some duplicates in ABL herbarium.

Taxonomic description

Opegrapha pauciexcipulata Aptroot & Yazici, **sp. nov.** FIGURES 1–4
MycoBank MB 512909

Thallus corticola, ochracea, prothallo nullo. Apothecia nigra, fusiformes, excipulo dimidiato, hymenio non insperso, subhymenio brunneo. Ascosporae aciculares, plerumque 7–9-septatae, 19–26 × 2.5–3 µm, perisporae gelatinosae 1 µm crassae.

Typus: Turkey, Black Sea Coast, Giresun, City centre, 250 m from the Black Sea, 40°55'01"N, 38°23'42"E, alt. 30 m, on *Pyrus* sp., 10 November 2007, Yazici 076, Yazici 0.1348 (KTUB–***holotypus***, ABL–isotypus).

Etymology: The epithet "paucexipulata" refers to *paucum* meaning little and *excipulum* meaning apothecium margin.

Thallus corticolous, dull, superficial, c. 0.1 mm thick, not corticate, smooth to rimose, ochraceous, covering an area of up to 4 cm diam, not surrounded by a prothallus. Apothecia unevenly dispersed, sessile, curved to wavy, narrowly fusiform with pointed ends, unbranched or with one or two perpendicular branches, up to 1 mm long, up to 0.3 mm wide, up to 0.1 mm high. Disc pale brown, soon opening and flat, dull, without pruina. Apothecium margin prominent, higher than the disc, black, shiny, c. 0.1 mm wide, often somewhat crenate, without thallus cover. Excipulum dense, black, c. 0.2–0.4 mm wide, absent below the hymenium, where only a mottled brown subhymenium is present. Hymenium not inspersed with oil droplets, c. 60–80 µm high, subhymenium mottled brown. Epihymenium not distinct. Paraphysoids anastomosing, rather knobbly, 2–3 µm wide in KOH. Ascospores acicular to narrowly fusiform, slightly curved, mostly 7 to 9 septa 8/ascus, 19–26 × 2.5–3 µm, surrounded by a 1 µm wide perispore. All parts IKI–negative and KOH–negative. Pycnidia globose, at least semi-immersed in the thallus, brown to black, 0.1–0.2 mm diam. Conidia acrogenous, acicular to filiform, curved, 12–14 × 1–1.5 µm.

Chemistry: K–, C–, KC–, P–, UV–; no substances detected (TLC).

Distribution and ecology — A corticolous species found in northern Turkey. See Yazici & Aptroot (2008) for a description of the habitat and the accompanying species.

Specimens examined — **Turkey.** Black Sea Coast, Giresun, City, 250 m from the Black Sea, 40°55'01"N, 38°23'42"E, alt. 30 m, on *Pyrus* sp., 10 November 2007, Yazici 1347 & 1348 (Karadeniz Technical University, Biology Department-topotypes); 650 m from the Black Sea, 40°55'02"N, 38°23'14"E, alt. 40 m, on *Platanus orientalis*, 10 November 2007, Yazici 01349 (KTUB).

Comments — *Opegrapha pauciexcipulata* is well characterized by the weakly carbonized excipulum below the hymenium. This character is known for only a few *Opegrapha* species (Olivier 1914, Poelt 1969, Awasthi 1991, Torrente & Egea 1989), none of which are corticolous or with 7- to 9-septate ascospores. A weakly carbonized excipulum is sometimes observed in specimens of other species with very thin thalli on hard substrates, but this is not the case with the new species.

Acknowledgments

We are grateful to Dr. Leo Spier and Dr. Laurens B. Sparrius for linguistic revision and helpful comments on an earlier draft of this manuscript.

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